

REMARKS

Claims 1-6, 8-11, 13-15, and 17-30 are currently pending in the application. Of these claims, claims 1, 10, 20, and 28 are independent.

Prior Art Rejections

In paragraphs 16-30 on pages 4-10 of the Office Action, claims 1, 10-19, and 28-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ranganathan et al., "The PEWs Microarchitecture: Reducing Complexity Through Data Dependence-Based Decentralization," 1998 ("Ranganathan").

In paragraphs 31-34 on pages 10-12 of the Office Action, claims 20-22 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,260,189 to Batten et al. ("Batten").

In paragraphs 36-45 on pages 12-16 of the Office Action, claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ranganathan in view of U.S. Patent No. 6,304,962 to Nair ("Nair").

In paragraphs 46-48 on pages 16-17 of the Office Action, claims 23-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Batten in view of U.S. Patent No. 6,427,204 to Arimilli et al. ("Arimilli").

In paragraphs 49-51 on pages 17-18 of the Office Action, claims 25-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Batten in view of Arimilli and further in view of U.S. Patent No. 6,018,798 to Witt et al. ("Witt").

In paragraphs 52-53 on page 18 of the Office Action, claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Batten in view of Rotenberg et al., "A Trace Cache Microarchitecture and Evaluation," 1998 ("Rotenberg").

Applicant respectfully traverses these rejections as follows.

Claim 1 recites a control flow logic to select and fetch a trace descriptor for processing, wherein the fetched trace descriptor includes at least one dependency descriptor and the dependency descriptor includes dependency information for an instruction sequence and a location of the instruction sequence.

Claim 10 recites a control flow logic device to select and fetch a trace descriptor, wherein the fetched trace descriptor includes a plurality of dependency descriptors having location and dependency information for corresponding instruction sequences.

Claim 28 recites selecting and fetching a trace descriptor in accordance with program control flow and identifying from the fetched trace descriptor a dependency descriptor including dependency information for a set of instructions and a location of the set of instructions.

Applicant respectfully submits none of the references cited in the rejections, whether alone or in any combination with one another, taught or suggested such features as claimed.

Even assuming arguendo that Ranganathan taught a trace descriptor, Applicant respectfully submits any trace descriptor selected and fetched by the tree-level predictor in Figure 3 of Ranganathan would not have a dependency descriptor because Ranganathan taught in sections 3.1 and 3.2.1, for example, that data flow dependences are generated by the RDFG or

accessed from the trace cache only after any such trace descriptor is selected and fetched by the tree-level predictor.

Claim 20 recites selecting and fetching a trace descriptor in accordance with program control flow and identifying from the fetched trace descriptor a dependency descriptor including dependency information for a set of instructions and a location of the set of instructions.

Applicant respectfully submits none of the references cited in the rejections, whether alone or in any combination with one another, taught or suggested such features as claimed. More particularly, Applicant respectfully submits Batten did not teach or suggest a dependency descriptor including a location of a set of instructions.

Noting the remaining claims depend from independent claim 1, 10, 20, or 28, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

It is respectfully submitted this patent application is in condition for allowance, for which early action is earnestly solicited.

The Examiner is invited to telephone the undersigned to help expedite the prosecution of this patent application.

Respectfully submitted,

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